

# FOREST STEWARDSHIP MANAGEMENT PLAN

Prepared For: Carroll County BOE

> Prepared By: Jim Strong MFC

Time Period Covered by This Plan: 2012 - 2021

Date Plan Prepared: 2012-02-15

Plan Type: Stewardship / Stewardship

This plan was developed in accordance with the rules of the Stewardship program.

Property Name: S16-T19N-R3E

# TABLE OF CONTENTS

LANDOWNER INFORMATION	3
FORESTER INFORMATION	3
DISCLAIMER	3
INTRODUCTION	3
OBJECTIVES	4
PROPERTY DESCRIPTION	4
GENERAL PROPERTY RECOMMENDATIONS	5
SOIL TYPES	7
STRATA	8
OTHER PLAN ACTIVITIES	13
PLAN MAP	14
PLAN MAP	15
STRATA ACTIVITY SCHEDULE	16

# LANDOWNER INFORMATION

Name: Carroll County BOE

Mailing Address: P O Box 256

City, State, Zip: Carrollton, MS 38917 Country: United States of America

Contact Numbers: Home Number:

Office Number: 662-237-9276

Fax Number:

E-mail Address:

Social Security Number (optional):

# FORESTER INFORMATION

Name: Jim Strong, Service Forester

Forester Number: 00898 Organization: MFC

Street Address: P O Box 95

City, State, Zip: Carrollton, MS 38917

Contact Numbers: Office Number: 662-237-6732

Fax Number:

E-mail Address: jstrong@mfc.state.ms.us

# PROPERTY LOCATION

County: Carroll Total Acres: 634 Latitude: -89.99 Longitude: 33.51

Section: 16 Township: 19N Range: 3E

## DISCLAIMER

This information was derived from a small sampling of the forest resources. It reflects a statistical estimation that is only intended to be accurate enough for the purposes of making decisions for the short-term management of these resources. These estimations are temporally static. Events and circumstances may occur within the survey area that will physically alter the forest resources and therefore will not be reflected in this plan.

## INTRODUCTION

This Forest Stewardship Management Plan will serve as a guide for accomplishing the goals and objectives for your property. In addition to addressing your specific goals and objectives, this plan includes recommendations for maintaining soil and water quality and protecting your forest from insects, disease, and wildfire. Recommendations are based on observation and assessment of the site.

# **OBJECTIVES**

#### Timber Production

The goal is to produce high quality sawtimber. This will be accomplished through reforestation and timber stand improvement practices such as herbicide applications, prescribed burning, thinning at specified intervals, and other silvicultural practices. Forestry Best Management Practices will be implemented to prevent erosion and protect water quality.

# Wildlife Management - General

The goal is to provide a diversity of habitats suitable for a variety of game and non-game wildlife species. Habitat management will focus on developing a variety of food, cover, water, and space. This will be accomplished by establishing and maintaining access roads and firelanes, providing openings within the forest, and the management of trees located within the Streamside Management Zone.

## PROPERTY DESCRIPTION

# General Property Information

This section of 640 acres is located along US Hwy 82. The South West corner of this section is found along the north boundary lane of Hwy 82. Homes and one business are located along the south property line also. Also a communication tower is found on the property along the south property line. A natural gas pipe line runs through the section along the western side. County Road # 322 runs through the northern part of the section. The entire section except the tower lease ,the pipe line and a 5 acre lease with a home that is located in the SW corner of the property is in timber production.

### Water Resources

The drainages of this section are in the Sandy Creek watershed. Sandy creek is a tributary of the Yazoo River. The objective is to protect, preserve and enhance all water sources and drainages on or transecting the property. Mississippi Best Management Practices will be implemented during all aspects of the management of this property to minimize the impact on all water resources.

#### Timber Production

The goal is to maximize the production of high quality timber. This will be accomplished through the application of timely thinning and other silvicultural practices designed to enhance timber quality and growth. Forestry Best Management Practices will be implemented to prevent erosion and protect water quality.

# Threatened and Endangered Species

No threatened and endangered species were identified during the reconnaissance and evaluation of this property.

If any threatened and or endangered species are discovered, immediate management procedures will be applied to protect these sensitive natural resources for future generations.

# *Interaction with Surrounding Property*

Prescribed practices should be carried out in a manner that will minimize adverse impacts on surrounding properties. Consideration should be given to potential air, water, visual, and other impacts. In addition, practices carried out should have positive effects on the surrounding community such as improved wildlife habitat and soil stabilization.

# Archeological and Cultural Resources

No Archeological and Cultural Resources were identified during a reconnaissance of the property.

If any Archeological and or Cultural Resources are discovered during the management of this property, immediate management practices will be applied to protect them.

### Soils General

Soils were evaluated on the property to determine the suitability of the site for the proposed activities. Forest practices were planned so as to minimize erosion or other adverse effects on the soil. The following soils were found on the property: Memphis Silt Loam, loring Silt Loam and the Gullied Land-Loring Complex.

For a complete description of these soils, please see the Soil Type Section in this plan.

### GENERAL PROPERTY RECOMMENDATIONS

## Forest Protection

A vigorous growing stand is the best defense to an attack from a variety of forest insects, plants and pathogens.

## **Insects and Diseases**

Trees are subject to attack from insects and diseases. Different insects and diseases affect trees according to the age, species, and condition of the trees. Planted stands of pines and pure stands of hardwoods are particularly susceptible to attack. Since there are many different insects and diseases, no attempt will be made here to explain all of them. The property should be inspected at least annually for possible signs of insect and disease activity. Some things to look for are:

- · Unseasonable leaf fall
- Discoloration of leaves or needles
- Pitch pockets on pine trees
- · Heavy defoliation of hardwood leaves
- Groups of three or more dying trees within a stand

This list does not cover all instances of insect or disease attacks. If anything unusual is noticed, report it to a forester. In most cases, insect and disease problems can be controlled if discovered early.

### Fire Protection

The Mississippi Forestry Commission will establish and maintain all firebreaks around the property and other forest management areas on the property. These firebreaks will help to protect your property from wildfires. All firebreaks will be established and maintained according to Mississippi Best Management Practices.

## Grazing

Tree seedlings should be protected from grazing until such time as the terminal bud of the sapling is beyond reach of livestock. Domestic livestock should be denied access to the tree planting area.

## **Boundary Lines**

It is the responsibility of the landowner to ensure that all property lines and boundaries designating areas to receive forestry work are clearly identified and visible to all contractors.

**Note:** Some forest practices may cause temporary adverse environmental or aesthetic impacts. These practices will only cause short-term adverse impacts where they are installed. Special efforts will be made to minimize adverse effects when carrying out any of the practices. Examples include: site preparation, planting, prescribed fires, firebreak installation and maintenance, road installation and maintenance, pesticide applications and timber harvesting.

# Water Quality Protection

The objective of the landowner is to protect, preserve and enhance all water sources on or transecting the property. This can best be achieved by implementation of Best Management Practices in all aspects of the management of the property.

#### Aesthetics

The goal is to assure that the property is managed in such a way that is aesthetically pleasing to the landowner as well as the community. Activities could include, maintaining buffer strips along the road and adjacent to the home site, planting wildflowers along the road, and trees with attractive fall and spring color along the drive and near the home site.

## Ecological Restoration

Ecological restoration is the process of assisting the recovery of an ecosystem that has be degraded, damaged, or destroyed. A reconnaissance of the property has been conducted and no ecological restoration activities are recommended at this time.

## Wildlife Mgt. Target Species

The objective of this practice is to provide habitat best suited for the featured or target species. Habitat management will focus on providing food, cover, water, and space to facilitate the target species.

### Environmental Education

Environmental educational goals are to provide educational opportunities for children and adults through the development of items such as nature trails with tree identification markers, wildlife viewing areas, picnic areas, parking, public restroom facilities.

# Wildlife Management General

The goal is to provide a diversity of habitats suited for a variety of game and non-game wildlife species. Habitat management will focus on providing a variety of food, cover, water, and space. This will be accomplished, in part, by establishing and maintaining access roads and firelanes, providing openings within the forest, and leaving mast producing and den trees.

At the present time, this entire section is leased out to 2 different hunting clubs. These clubs focus their main hunting for deer and eastern wild turkey. The Clubs maintain all firelanes and roads and plant numerous food plots to supplement food for the wildlife during the winter months.

# Timber Management

Timber management goals for this property are to manage timber resources in such a manner as to maximize timber production throughout the life of the stand.

### Recreation

According to landowner objectives the recreational use of the property could prove to be an avenue for personal enjoyment or for generating income. An evaluation of your property should be conducted and a plan developed to accomplish your specific goals for recreational activities on your property.

## SOIL TYPES

6

The Memphis component makes up 90 percent of the map unit. Slopes range from 0 to 40 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon ranges from 1 to 7 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria. Loblolly Site Index ranges from 90 to 105.

#### 5D3

The Loring component makes up 90 percent of the map unit. Slopes are 8 to 12 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer, fragipan, is 14 to 35 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not

flooded. It is not ponded. A seasonal zone of water saturation is at 28 inches during January, February, March, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 6e. This soil does not meet hydric criteria. Loblolly Site Index = 95.

46

Generated brief soil descriptions are created for major soil components. The Gullied land is a miscellaneous area. The Loring component makes up 27 percent of the map unit. Slopes are 5 to 20 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer, fragipan, is 14 to 35 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

## **STRATA**

Strata 1

Strata Description

This strata consists of the following stands: #9, #13, #15, #21 and #30 for a total of 300.44 acres. This well stocked loblolly pine plantation was hand planted in February 1986. The pines were thinned in January 2002 and again in February 2010. This stand consists mainly of small pine sawtimber with an average diameter of 14 inches and that has approximately 140 trees to the acre. The average merchantable height is 45 feet. There are approximately 90 square feet of basal area per acre and 75 tons to the acre at the present time.

## Stand Recommendations

This loblloly pine stand will be managed on a 35 year rotation using sound forestry managemement practices.

Forestry practices that are carried out will benefit the native wildlife by providing additional cover and food sources.

# **Activity Recommendations**

Harvest

These strata will be divided into three sale areas for future management.

Stand #13 for a total of 132 acres will be evaluated in 2017 for a possible thinning.

Stands #9 and #15 for a total of 112 acres will be evaluated in 2018 for a possible thinning.

Stands #21 and #30 for a total of 54 acres will be evaluated in 2019 for a possible thinning.

These stands will be 30 years old at that time and if a thinning sale is recommended, the MFC would mark the trees to be removed and then a timber sale could be held. The smaller size sawlogs and all the chip-n-saw timber should be removed to achieve a basal area of 75 square feet per acre.

These stands have been prescribe burned after each thinning which has created more herbaceous vegetation for the native wildlife.

## Fire Protection

Prescribed burning is recommended in this strata to reduce fuel loading, the potential for wildfire, and to improve wildlife habitat. Aprescribe burning plan must be developed and followed in the application of the burn. Because of equipment, personnel and weather requirements, the application of a prescribed fire is limited to only those days that meet requirements of the burning plan. A prescribed burning manager should be employed to conduct the burn. The Mississippi Forestry Commission ( on a limited basis) and other prescribed burning vendors are available to conduct prescribe burning.

Prescribe burning will be scheduled as follows:

Stand #13 in the fall of 2019; Stand #9 and #15 in the fall of 2020: and Stand #21 and #30 in the fall of 2021.

## Strata 2

# Stand Description

This strata consists of the following stands: #2,#16, #22 and #31 for a total of 66.52 acres. This strata is a well stocked sub-merchantable loblolly pine plantation that was hand planted in January 1998. The stand has 550 trees per acre with an average diameter of 5 inches. The average total height is 28 feet tall with a basal area of 85 square feet per acre with 65 tons per acre.

# Stand Recommendations

This loblolly pine plantation will be managed on a 35 year rotation using sound forestry management practices.

The forestry practices that will be carried out will benefit the native wildlife.

**Activity Recommendations** 

#### Harvest

Stand #2, #16 and #31 will need to evaluated by the Mississippi Forestry Commission in 2018 for a possible first thinning. An operator select method of harvesting the trees would be recommended for the first thinning. The harvester would be allowed to harvest the trees that the MFC would determine that needed to be removed to achieve a basal area of 75 square feet per acre.

The thinning will help to create more herbaceous vegetation for the native wildlife by allowing more sunlight to reach the forest floor..

#### Fire Protection

A prescribed fire is recommended for this site in the fall of 2020 to reduce fuel loading and the potential for a wildfire to occur. A prescribed burning plan must be developed and followed in the application of the burn. Because of equipment, personnel and weather requirements, the application of a prescribed fire is limited to only those days that meet requirements of the burning plan. A certified prescribed burning manager should be employed to conduct the burn. The Mississippi Forestry Commission (on a limited basis) and other certified prescribed burning vendors are available to conduct prescribed burning.

The burning will help keep the plant succession at a stage that the native wildlife will benefit from. The deer and turkey will use these stands for food and cover.

#### Strata 3

# Stand Description

This Strata consists of stand # 17 for a total of 8.35 acres. This strata was established in 1975 and consists of hardwood sawtimber with an average diameter of 20 inches of oaks and some scattered pine sawtimber that average 14 inches in diameter. There are approximately 90 tons of wood per acre with an average total height of 50 feet..

The strata has not been managed in the past due to the adjoining landowner claiming a fence on the 16 th section to be his and we are not allowed to cross over the fence to manage this stand.

### Stand Recommendations

The BOE has been informed of this problem in the past by the Mississippi Forestry Commission. Once the timber in this starta can be managed, the MFC will decide when to harvest the timber and the reforestation practices that will be needed.

Strata 4

## Stand Description

This strata consists of the following stands: #3, #4, #5, #6, #7, #28, #33 and #35 for a total of 129.98 acres. This strata is a well stocked loblolly pine plantation that was hand planted in January 1995. The stand is mainly pulpwood with an average diameter of approximately 7.0 inches. There are 150 trees to the acre that average in total height of 35 feet. This plantation was row thinned in 2008 and now has 70 tons per acre.

This Strata was prescribed burned in March 2010 which helped to reduce the heavy fuel build up from the previous thinning. Native wildlife benefited from the burning by the increase in herbaceous vegetation that came back after the prescribe burn with the increased sunlight to the forest floor.

#### Stand Recommendations

This loblloly pine stand will be managed on a 35 year rotation using sound forestry management practices.

The forestry practices that will be carried out will benefit the native wildlife.

# **Activity Recommendations**

#### Harvest

This Strata should be thinned to a BA of 75 in 2016. By selectively removing some of the pines, the thinning will allow more growing room which in return will allow the remaining pines to grow much faster into sawtimber.

The MFC will determine the trees to be removed for the thinning sale at that time based on the current condition of the stand.

Native wildlife will benfit from the thinning becauce of the new growth of tender vegetation created by more sunlight reaching the forest floor.

## Fire Protection

A prescribed fire is recommended in 2018 for this site to reduce fuel loading, and the potential for a wildfire to occur. A prescribed burning plan must be developed and followed in the application of the burn. Because of equipment, personnel and weather requirements, the application of a prescribed fire is limited to only those days that meet requirements of the burning plan. A certified prescribed burning manager should be employed to conduct the burn. The Mississippi Forestry Commission (on a limited basis) and other certified prescribed burning vendors are available to conduct prescribed burning.

The burning will help reduce the heavy fuel buildup of pine straw and dense vegetation which will allow tender vegetation to grow for several years which will benefit the native wildlife for food and cover needs.

### Strata 5

# Stand Description

This strata is best described as a Stream Management Zone. The steep slopes that drain into Sandy Creek are inacessable to normal logging equipment. The hardwood pulpwood and scattered pine puplwood was not harvested in 1994 when the adjoining strata was harvested.

This strata consists of the following stand: #34 for a total of 89.44 acres. This strata consists of hardwood pulpwood trees that average approximately 9 inches in diameter with a few scattered pines. These trees were establised in 1979 and are located in the drains and drainages and along the main creek that runs through the strata. There are approximately 150 trees per acre that average 35 feet tall and that has 80 tons per acre. The average diameter is 7 inches. This strata runs irregular throuhout Strata #4 and needs to be thinned if possible when Strata 4 is thinned again in 2016.

# Stand Recommendations

This stand will be managed on a 65 year rotation. A thinning could be carried out in the next 10 years to remove some of hardwood pulpwood and the scattered pine.

## **Activity Recommendations**

### Harvest

This Strata will need to be thinned in 2015 when Strata 4 is thinnied. At that time,the Mississippi Forestry Commission will mark the trees to be removed and a timber sale will be conducted. The trees to be harvested will be of poor quality and form to make more growing room for the remaining trees. All pines will need to be harvested which will make this a hardwood stand instead of a mixed stand of trees. Care will be required to be taken if the timber is harvested inside this SMZ. All Best Management Preatice will be followed.

Native wildlife use this stand for refuge and for food. The increased sunlight will create more herbaceous vegetation to the forest floor.

### Strata 6

# Strata Description

This Strata consists of Stand # 1 and Stand # 14 for a total of 5.32 acres that is mainly hardwood pulpwood with scattered young loblolly pines. These 2 small stands are located along Highway 82 and CR 322. Also a farm residential lease is located between both small stands.

These 2 small stands because of their location and size are left as an Aesthetic Buffer along US Hwy 82 and the house on the residential lease.

There are 140 hardwood pulpwood trees to the acre of oaks, maples, sweetgum and other hardwood species that average 7 inches in diameter. The average height is 30 feet

and the stand has 45 tons per acre. The trees were established in 1980. There are approximately 60 loblolly pine trees per acre that average 5 inches in diameter with an average total height of 25 feet that was established in 1998 and that has 15 tons per acre.

#### Stand Recommendations

This stand will be managed on a 65 year rotation. No activites are planned for this stand for the next 10 years.

Native wildlife take refuge in these two small stands and these stands provide some acorns for deer and turkey.

# OTHER PLAN ACTIVITIES

Boundary Lines

Line Description

Routine inspection and general maintenance of the roads, firelanes and boundary lines will ensure the overll appearance and aesthetics of the property.

## Line Recommendations

The 4 miles of boundary lines will be repainted with red paint at eye level on the old hacked marks and all corners marked with a X to insure that the property boundaries are clearly identified.

# **Activity Recommendations**

**Property Activities** 

Routine inspections and general maintenance of the roads, Firelanes, and boundary lines will ensure overall appearance and aesthetics of the property.

All property lines will be remarked with red paint during the summer of 2015.

# **Property Activities**

Routine inspections and general maintenance of the roads, Firelanes, and boundary lines will ensure overall appearance and aesthetics of the property.

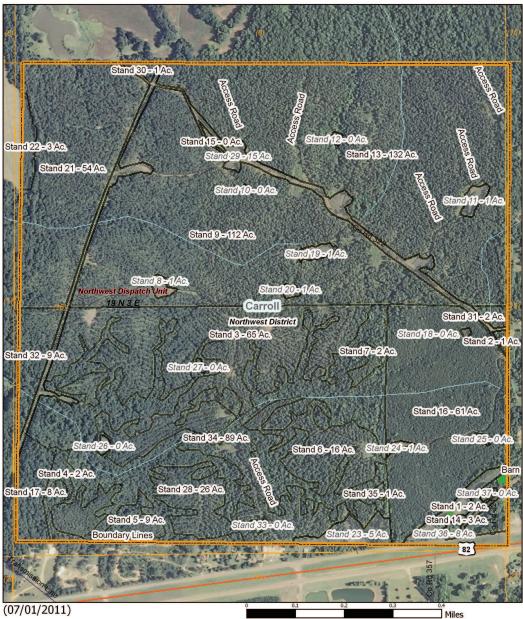
All property lines will be remarked with red paint during the summer of 2020.



# S16 T19N 3E Carroll County BOE Highway 82 2012 to 2021

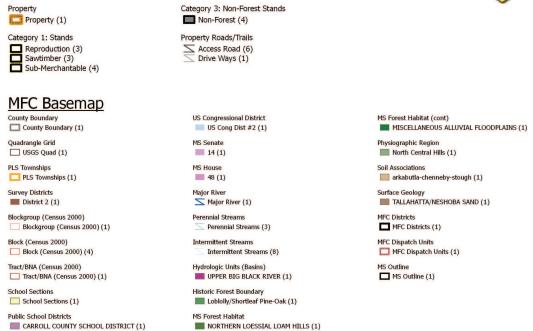
634.21 Acres





# S16 T17 R6E Carroll County BOE





# Stand Activity Schedule for Carroll County BOE 16 19N 3E

		10 13N 3L			
Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
2015					
5	34	Harvest, Mechanical, Thin, Machine, Loblolly	89	\$3,115.00	\$11,445.40
		Yearly Totals	89	\$3,115.00	\$11,445.40
2016					
4	3	Harvest, Mechanical, Thin, Machine, Loblolly	65	\$2,275.00	\$14,735.50
4	4	Harvest, Mechanical, Thin, Machine, Loblolly	2	\$81.90	\$530.48
4	5	Harvest, Mechanical, Thin, Machine, Loblolly	9	\$322.35	\$2,087.91
4	6	Harvest, Mechanical, Thin, Machine, Loblolly	16	\$564.20	\$3,654.40
4	7	Harvest, Mechanical, Thin, Machine, Loblolly	2	\$65.45	\$423.93
4	28	Harvest, Mechanical, Thin, Machine, Loblolly	26	\$910.70	\$5,898.73
4	32	Harvest, Mechanical, Thin, Machine, Loblolly	9	\$306.60	\$1,985.89
4	35	Harvest, Mechanical, Thin, Machine, Loblolly	1	\$19.60	\$126.95
		Yearly Totals	130	\$4.545.80	\$29.443.80
2017					
1	13	Harvest, Mechanical, Thin, Machine, Loblolly	132	\$4,633.30	\$97,802.34
		Yearly Totals	132	\$4.633.30	\$97.802.34
2018					
1	9	Harvest, Mechanical, Thin, Machine, Loblolly	112	\$3,920.00	\$61,600.00
1	15	Harvest, Mechanical, Thin, Machine, Loblolly	0	\$16.45	\$258.50
2	2	Harvest, Mechanical, Thin, Machine, Loblolly	1	\$23.45	\$189.56
2	16	Harvest, Mechanical, Thin, Machine, Loblolly	61	\$2,146.20	\$17,348.65

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
2	31	Harvest, Mechanical, Thin, Machine, Loblolly	2	\$53.90	\$435.70
4	3	Fire Protection, Other, Burn, Hand, Fuel Reduction	65	\$1,627.50	\$0.00
4	4	Fire Protection, Other, Burn, Hand, Fuel Reduction	2	\$58.50	\$0.00
4	5	Fire Protection, Other, Burn, Hand, Fuel Reduction	9	\$230.25	\$0.00
4	6	Fire Protection, Other, Burn, Hand, Fuel Reduction	16	\$403.00	\$0.00
4	7	Fire Protection, Other, Burn, Hand, Fuel Reduction	2	\$46.75	\$0.00
4	28	Fire Protection, Other, Burn, Hand, Fuel Reduction	26	\$650.50	\$0.00
4	32	Fire Protection, Other, Burn, Hand, Fuel Reduction	9	\$219.00	\$0.00
4	35	Fire Protection, Other, Burn, Hand, Fuel Reduction	1	\$14.00	\$0.00
		Yearly Totals	306	\$9.409.50	\$79.832.41
2019					
1	13	Fire Protection, Other, Burn, Hand, Fuel Reduction	132	\$3,300.00	\$0.00
1	21	Harvest, Mechanical, Thin, Machine, Loblolly	54	\$1,890.00	\$39,895.20
1	30	Harvest, Mechanical, Thin, Machine, Loblolly	1	\$35.00	\$738.80
2	22	Harvest, Mechanical, Thin, Machine, Loblolly	3	\$105.00	\$848.76
		Yearly Totals	190	\$5,330.00	\$41,482.76
2020					
1	9	Fire Protection, Other, Burn, Hand, Fuel Reduction	112	\$2,800.00	\$0.00
1	15	Fire Protection, Other, Burn, Hand, Fuel Reduction	1	\$25.00	\$0.00
2	2	Fire Protection, Other, Burn, Hand, Fuel Reduction	1	\$16.75	\$0.00
2	16	Fire Protection, Other, Burn, Hand, Fuel Reduction	61	\$1,533.00	\$0.00
2	22	Fire Protection, Other, Burn, Hand, Fuel Reduction	3	\$74.75	\$0.00
2	31	Fire Protection, Other, Burn, Hand, Fuel Reduction	2	\$50.00	\$0.00
		Yearly Totals	180	\$4,499.50	\$0.00

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue	
2021	2021					
1	21	Fire Protection, Other, Burn, Hand, Fuel Reduction	54	\$1,350.00	\$0.00	
1	30	Fire Protection, Other, Burn, Hand, Fuel Reduction	1	\$25.00	\$0.00	
		Yearly Totals	55	\$1.375.00	\$0.00	
		Grand Totals	1.082	\$32,908.10	\$260,006.71	